

REMARKS/ARGUMENTS

Introduction:

Claims 1 and 7 are amended, and claims 8-20 are canceled. (Applicants note that claim 7 was amended to correct a typographical error and not for reasons of patentability.) In addition, claims 21-36 are newly added. Claims 1-7 and 21-36 are now pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Response to Restriction Requirement:

Applicants affirm election of Group I (claims 1-7) without traverse and have canceled claims 8-20 without prejudice.

Formal Matters:

The Examiner noted the possible use of trademarks in the specification and requested that any such possible trademarks be capitalized. In response, Applicants have amended paragraphs 0028, 0034, and 0039.

In addition, noting typographical errors, the Examiner objected to paragraphs 0028, 0046, 0048, 0053, 0058, 0060, 0063, and 0064 of the specification. Applicants have amended those paragraphs and believe that the Examiner's concerns have been addressed.

Actions on the Merits:

Claims 1-3, 4, and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,046,242 to Kuzma (hereinafter "the Kuzma Patent"). Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as obvious in view of the Kusma Patent and prior art allegedly admitted by Applicants ("the APA"), and claims 6 and 7 were rejected as obvious in view of Kuzma and United States Patent No. 3,378,622 to Marin ("the Marin Patent"). Applicants respectfully traverse these rejections.

Claim 1 recites "an electrical contact cap in a hole in a substrate," and claim 1 further recites that "a portion of the cap inside the hole extends across the hole forming a barrier portion inside the hole closing the hole." As shown in Figure 4 of the Kuzma Patent, the conductive feed through 34 (which the Patent and Trademark Office ("PTO") equated with the cap of claim 1) does not include any portion that extends across the hole in the green sheet 32 "forming a barrier

portion inside the hole closing the hole." Nor is there any teaching or suggestion in the prior art that would lead a person skilled in the field to modify the conductive feed through 34 to include a barrier that extends across an inside portion of the feed through 34. Kusma thus fails to teach or suggest a cap in which "a portion of the cap inside the hole extends across the hole forming a barrier portion inside the hole closing the hole" as recited in claim 1. For at least this reason, claim 1 is patentable over the Kuzma Patent.

Claims 2-4 and 6 depend, directly or indirectly, from claim 1 and are therefore patentable over the Kuzma Patent at least because of their dependency from claim 1.

Claims 4-7 also depend from claim 1 and distinguish over the Kuzma Patent at least because of their dependency from claim 1. Moreover, neither the APA nor the Marin Patent make up for the above discussed deficiencies in the Kuzma Patent. In addition, the PTO does not cite any teaching in the Kuzma Patent, the APA, or the Marin Patent that would lead a person skilled in the field to combine the APA or the Marin Patent with the Kuzma Patent as those references were combined in the Office Action. The combination of the APA and the Marin Patent with the Kuzma patent is therefore improper.

At least for each of the foregoing reasons, claims 4-7 also distinguish over any combination of the Kuzma Patent, the APA, and the Marin Patent.

New independent claim 21 recites that the cap is one "terminating inside the hole closing the hole intermediate the first and second ends thereof." As generally discussed above, the Kuzma Patent fails to teach or suggest such a cap. For example, the feed through 34 in the Kuzma patent is open and flared radially outwardly at the first side of substrate 32 into a concavity 34c, and the opposite end of feed through 34 is "pinched, as shown by the numeral 34a in Fig. 6C, following which the tip is welded as shown by the numeral 34b." (Kuzma Patent, column 10, lines 55-57.) As seen in Figure 4, as well as in Figure 6C, this closed end of feed through 34 comprising pinched portion 34a and welded tip 34b is disposed outside the hole through substrate 32, projecting beyond the second surface of substrate 32. Therefore, the Kuzma Patent fails to disclose or suggest a contact cap "extending partially into the hole and terminating inside the hole closing the hole intermediate the first and second ends thereof," as recited in new independent claim 21. For at least the foregoing reasons, Applicants respectfully submit that new independent claim 21 is neither anticipated nor rendered obvious by the Kuzma

Patent, and new independent claim 21 is patentable over all of the references of record taken singly or in combination.

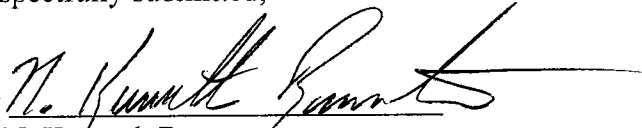
New claims 22-36 depend directly or indirectly from new independent claim 21. At least because of their dependency from claim 21, new claims 22-36 are patentable over all of the references of record taken singly or in combination.

Conclusion:

In view of the foregoing, Applicants submit that all of pending claims 21-36 are allowable and that the application is in condition for allowance. Should the Examiner determine that discussion with the undersigned would advance prosecution, the Examiner is invited to contact the undersigned by telephone at (801) 323-5934.

Respectfully submitted,

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